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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,586	10/20/2003	Sanlian Chen	FP9202	2531

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EXAMINER
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VERBITSKY, GAIL KAPLAN

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/687,586	CHEN, SANLIAN	
	<b>Examiner</b>	<b>Art Unit</b>	
	Gail Verbitsky	2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-12 and 14 is/are rejected.
- 7) ☒ Claim(s) 9, 13 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____  | 6) <input type="checkbox"/> Other: ____                                     |

## DETAILED ACTION

### *Claim Objections*

1. Claims 2, 5, 12-13 and 15 are objected to because of the following informalities:

Claim 2: perhaps applicant should replace "first module" in line 2 with —second module—in order to clearly describe the invention,

Claim 5: "said circuit" in line 3 makes the claim language confusing because it is not clear what particular circuit applicant means: incomplete, complete or an integrated circuit. Furthermore, please note that in the rejection on the merits, the examiner considers that all the elements of claim 5 are mounted to a printed circuit board.

Claim 12: "said light generator", "said buzzer", in lines 3-4 lack antecedent bases.

Claim 13: The claim is objected to because they include reference characters which are not enclosed within parentheses.

Reference characters corresponding to elements recited in the detailed description of the drawings and used in conjunction with the recitation of the same element or group of elements in the claims should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. See MPEP § 608.01(m). In this case, reference characters, i.e., "232" and "12" should be placed in parentheses, i.e., to be replaced with —(232)—and —(12)—respectively.

Claim 15: "said conductive wire" in line 3, "said metal films" in lines 3-4 lack antecedent bases. Appropriate correction is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by prior art in page 1 and Fig. 1 by Yu (U.S. 20030002561 filed on 07/02/2001) [hereinafter Prior Art].

Prior Art discloses in Fig. 1 an electronic clinical thermometer comprising two detachable modules/ parts/ units. A first module (measuring body) 1' has an incomplete electronic measuring circuit in that it lacks two electronic elements (temperature sensor and electric heater) 2' and 4'. The two electronic elements 2' and 4' are mounted within a second detachable module 11'. It is inherent, that, when these two modules 1' and 11' are attached together, they form a complete clinical thermometer ready to measure patients' temperature.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 3 is rejected under 35 U.S.C. 102(b) as being anticipated by Shiokawa (U.S. 5522662).

For claim 3: Shiokawa discloses in Fig. 12 a measuring body (first module) 70, a temperature sensing device (second module) including a measuring probe, a temperature sensing section, a connection seat A. The device also comprises a connection structure (conductive member/ cable) 40 connecting the measuring body

and the temperature-sensing device. The measuring body also comprises a power switch 72, a display 71 and, inherently, a temperature measuring circuit driving the display. The measuring body is incomplete in that that it does not contain temperature sensors. The temperature-sensing device (second module), on the other hand, comprises temperature sensors 103 and 104. When two modules are connected, they, inherently, form a complete temperature sensing circuit. (The numeral A has been added by the Examiner, see attachment # 1 to the Office action).

5. Claims 3-4 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated Egawa et al. (U.S. 5232284) [hereinafter Egawa].

Egawa teaches in Fig. 8-9 a clinical thermometer whose main body (measuring body/ first module) 1, a temperature-sensing device (second module) which includes a probe 16, comprises a temperature detecting section 3 which contains a temperature sensitive sensor 3b and an infrared sensor 3a. The sensor 3b is a thermistor (temperature dependent resistor) to measure an ambient (room, about 25<sup>0</sup>C) temperature of the infrared sensor, and thus, acting as a reference resistor. The sensor 3a is preheated to 36.5 <sup>0</sup>C (37<sup>0</sup>C). The measuring body (first module) 1 is provided with a power switch 13, a display 6 and a temperature measuring circuit (i.e., amplifier 51, peak and hold circuit 53, etc.) being incomplete, when the second module is not attached to the first module 1. The incomplete measuring circuit is being controlled by an operating section (integrated circuit) 60 of a circuit board 26. Inherently, it is considered, that, when the first module 1 is connected by wiring (connection seat) to the

second module via conductive wires/ connective structure 24, 25, the incomplete circuit of the printed board becomes complete.

6. Claims 1, 3-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Pompei (U.S. 6219573).

Pompei (U.S. 6219573) discloses in Figs. 1-2, 6, 8 a clinical thermometer comprising a temperature sensing device (second module) including a measuring probe, temperature sensing section, a connection seat, two temperature sensors 28 and 271, a connection structure (connecting wires) connecting the temperature sensing device to a measuring body (second module) 14, as shown in Figs. 6 and 8. The sensor 271 is a thermistor (temperature dependent resistor) measuring an ambient/ cold junction temperature and thus being a reference resistor.

The measuring body (second module) 14, as it is shown in Fig. 8, does not contain the temperature sensors 28 and 271, thus, its measuring circuit incomplete when the second module 14 is not attached to the first module. Furthermore, it comprises a display 16, a switch  $T_i$ , 22 and a switch (internal or external) 106 for power mode locking power for a selectable delay. Thus, inherently, the circuit comprises a delay circuit. The measuring body 14 also provided with a flashing mode (col. 15, line 18), and thus, inherently a light generator to provide the flashing mode, and a buzzer (sound source) 90. The incomplete circuit, as shown in Fig. 8, is controlled by a microprocessor (chip/ integrated circuit) 75. The device also has a battery. The two modules are

connected with a connection seat A which is hard (or soft) (the numeral A has been added by the Examiner, see attachment # 2 to the Office action).

7. Claims 1, 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Canfield et al. (U.S. 6186959).

Canfield discloses an electronic clinical thermometer comprising a second module (temperature sensing device) 22 and a first module (measuring body) 24. The second module 22 comprises at least two electronic components, a temperature sensor 106 and a microprocessor 109, while the first module 24 is lacking these two components.

The first module 24 is incomplete in that it comprises an incomplete temperature sensing circuit 402 comprising a microprocessor, said circuit is being incomplete when the second module 22 is not attached to the first module 24. The incomplete circuit 402 is controlled (under control) by a software/ memory (integrated circuit) module 404. The first module also comprises a display 26 and a power switch.

The incomplete circuit 402 can also communicate with the outside world (central control system) via a master communication and programming port 410. The device also comprises a battery 812 with a cover, and a buzzer/ annunciator 406. The first module 24, as shown in Fig. 11, comprises an upper housing portion 800 and a lower housing portion 802.

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 6 rejected under 35 U.S.C. 103(a) as being unpatentable over Pompei in view of CN 1304129 A [hereinafter CN].

Pompei does not explicitly teach a backlight plate and its reset, as stated in claim 6.

CN teaches a microprocessor supplying a current to a backlight plate so as to start light or not (reset) according to a condition of electronic equipment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the microprocessor in an integrated circuit disclosed by Pompei, so as to incorporate a reset circuit, as taught by CN, in order to reset the light on the backlight on/ off, so as to prolong the service life of the backlight plate, as already suggested by CN.

10. Claims 1-4, 8, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gerlitz (U.S. 6435711) in view of Pompei.

Gerlitz discloses in Figs. 1-2 an electronic clinical thermometer comprising a first detachable module (measuring body) 10 whose electronic measuring circuit 14, etc., is incomplete and lacks two electronic components 68 and 61 which are mounted in a second detachable module (temperature sensing device/ detector head) 12. The



second module 12 comprises a temperature sensing section 60. When the two modules 10 and 12 are attached together by means of a threaded connection seat 19 and conducting member (plug/ pin header to socket) 48. The element 68 is a thermopile, the element 61 is a thermistor (temperature dependent resistor) measuring an ambient temperature and thus, being a reference resistor.

The measuring body (first module) 10 includes a display 15, a battery 16, a buzzer 18 mounted in an opening in the measuring body 10, and an incomplete temperature measuring (temperature determining) circuit 14.

For claim 2: the second module 12 comprising an amplifier 46 which is acting as a resistance matching device since it makes the resistance of the thermistor readable by the circuit 14 of the first module. Thus, it is considered, that the second module 12 is a resistance-matching module, which is connected to the incomplete temperature sensing circuit 14 of the first module 10 by means of a connection structure (plug) 48.

For claim 8: said temperature sensing section 60 is attached to the measuring probe 54 by means of a metal (rigid) material 51.

Although, there should be some control circuit, i.e., a microprocessor (integrated circuit/ chip) to control and coordinate all the measurements and calculations performed by the circuit 14, Gerlitz does not explicitly state that incomplete temperature measuring circuit 14 is controlled by an integrated circuit, as stated in claim 3.

Pompei discloses a device in the filed of applicant's endeavor wherein the incomplete temperature measuring circuit comprises a microprocessor (integrated circuit/ chip) 75 controlling the circuit and coordinating all calculations.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the incomplete temperature sensing circuit 14 of the device, disclosed by Gerlitz, so as to have a controlling integrated circuit/ chip, such as a microprocessor, as taught by Pompei, so as to control the circuit and to coordinate all the calculations, in order to make all the measurements fast, accurate, minimize the size of the device and, to provide the user with a correct temperature.

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Canfield in view of Intractor (U.S. 20030092971, filed on 11/12/2001).

Canfield discloses the device as stated above in paragraph 7.

Canfield does not explicitly teach that the incomplete measuring circuit has a wireless transmission for transmitting measured result to the central system, as stated in claim 7.

Intractor in Figs. 1-3 discloses a temperature-sensing device comprising a first module, a second module, and a wireless communication between the second module (incomplete temperature measuring circuit) and a base station (central control system) having a blue tooth (wireless) receiver 140. Thus, the second module comprises a wireless transmission circuit (blue tooth transmitter, paragraph [0018]), in order to perform such a communication.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device, disclosed by Canfield, so as to have a wireless transmitter, as taught by Intractor, so as to allow the operator to transmit the

temperature data to a central location, in order to allow the medical personal to obtain temperature data of a plurality of patients at the same time.

12. Claims 1, 3, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zaragoza et al. (U.S. 5013161) [hereinafter Zaragoza] in view of the Prior Art by Yu (U.S. 20030002561) [hereinafter Prior Art].

Zaragoza discloses in Fig. 6 a clinical electronic thermometer comprising a first module (measuring body) A and a second detachable module B. The first module (measuring body) A comprises a power switch 33, a display 31, a battery 58 (col. 6, line 15), a buzzer (audible sound) (col. 4, line 14) positioned on a circuit board. The measuring body A also comprises necessary elements for converting temperature into a digital readout (col. 4, lines 1-3). Inherently, these necessary elements are incomplete (incomplete temperature measuring circuit) without connecting to a temperature-measuring element (second module) 25 by means of a connection structure being conductive wires 34, 35, because, when it is not connected to a second module 25, the necessary elements are incomplete. The necessary electrical elements (incomplete circuit) are controlled by means (integrated circuit) included by the circuit board to automatically shut it off (col. 4, lines 17-18).

The second module B comprises a hollow probe 22, a connection seat 41, said temperature sensing element (section) 25 which is, inherently, either soft or rigid, comprising an electronic element (thermistor) 27 that is not present in the measuring

body A (the numeral A-b have been added by the Examiner, see attachment # 3 to the Office action).

Zaragoza does not explicitly teach that the first module comprises at least two electronic elements.

Prior Art discloses in Fig. 1 a device in the field of applicant's endeavor wherein, a first module comprising at least two electronic elements, temperature sensor and a heater.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device, disclosed by Zaragoza, so as to have two electronic components, such as a temperature sensor and a heater, in order to preheat the sensor, and thus, provide the operator with a fast acting thermometer, as well known in the art.

13. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zaragoza and Prior Art as applied to claims 1, 3, 8 above, and further in view of Brunvoll (U.S. 20040101029).

Zaragoza and Prior Art disclose the device as stated above in paragraph 12.

They do not explicitly teach the particular top cover and bottom cover of the measuring body (first module).

Brunvoll discloses in Fig. 1 a device in the field of applicants endeavor wherein a second module comprises a top cover 18 and a bottom cover 20, wherein the bottom cover 20 has an opening (slot) 24 on a top of its front section, a recess A on its bottom.

Two lateral sides of said front section of said bottom cover 20 have engaging blocks B to be engaged with the rest of a casing of the device (the numerals A-B have been added by the Examiner, see attachment # 4 to the Office Action).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device, disclosed by Zaragoza and Prior Art, so as to replace the housing of the have two electronic components, such as a temperature sensor and a heater, in order to preheat the sensor, and thus, provide the operator with a fast acting thermometer, as well known in the art.

With respect to the particular material, i.e., plastic to make covers, as stated in claim 11: the particular material, absent any criticality, is only considered to be the "optimum" material that a person having ordinary skill in the art at the time the invention was made using routine experimentation would have found obvious to provide for the stud disclose by prior art since it has been held to be a matter of obvious design choice and within the general skill of worker in the art to select a known material on the basis of its suitability for the intended use of the invention. In re Leshin, 125 USPQ 416.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the covers in the device, disclosed by Zaragoza and Prior Art, of plastic, because plastic is known to be commonly used for covers and housings for clinical thermometers.

14. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zaragoza and Yu as applied to claims 1, 3, 8 above, and further in view of Dotan (U.S. 6250802).

Zaragoza and Prior Art disclose the device as stated above in paragraph 12.

They do not teach the particular location of the buzzer, as stated in claim 5.

Dotan discloses in Figs. 1, 3 a device in the field of applicants' endeavor, wherein, a measuring body comprises an integrated/ printed circuit 43 and a buzzer (combination of 46 and a switch/ key 45) mounted at an opening A and on said circuit. In addition, Dotan teaches key (switch) 45 activating an electrical circuitry to a measuring mode (power switch) is mounted onto the same circuit board (the numeral A has been added by the Examiner, see attachment # 5 to the Office Action).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device, disclosed by Zaragoza and Prior Art, so as to replace the housing of the have two electronic components, such as a temperature sensor and a heater, in order to preheat the sensor, and thus, provide the operator with a fast acting thermometer, as well known in the art.

15. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zaragoza and Prior Art as applied to claims 1, 3, 8 above, and further in view of Muramoto et al. (U.S. 4549819) [hereinafter Muramoto] and Dotan.

Zaragoza and Prior Art disclose the device as stated above in paragraph 12.

They do not teach to mount a light generator on a circuit board, and a battery cover, as stated in claim 12.

Muramoto discloses in Fig. 2 a device in the field of applicant's endeavor, wherein a light generator LMP is mounted on a printed circuit board 120 along with a display 126. The device also has a battery with a battery cap/ cover 11.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device, disclosed by Zaragoza and Prior Art, so as to mount the light generator on a printed circuit board, as taught by Muramoto, because it is very well known in the art to mount majority of the elements onto the same printed board, in order to minimize the dimensions of the device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device, disclosed by Zaragoza and Prior Art, so as to add a battery cover to the battery, as taught by Muramoto, so as to allow the user to operate the device wirelessly and to protect the battery from possible contamination and harsh environment.

They do not teach to mount a buzzer on a circuit board, as stated in claim 12.

Dotan discloses in Figs. 1, 3 a device in the field of applicants' endeavor, wherein, a measuring body comprises an integrated/ printed circuit 43 and a buzzer 46 is being mounted at an opening A and on said circuit. In addition, Dotan teaches key (switch) 45 activating an electrical circuitry to a measuring mode (power switch) is mounted onto the same circuit board (the numeral A has been added by the Examiner, see attachment # 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device, disclosed by Zaragoza and Prior Art,

so as to mount the buzzer on a printed circuit board, as taught by Dotan, because it is very well known in the art to mount majority of the elements onto the same printed board, in order to minimize the dimensions of the device.

***Allowable Subject Matter***

15. Claims 9, 13, 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

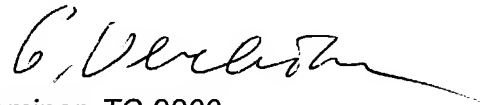
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in the PTO-892 and not mentioned above disclose related devices and methods.

Any inquiry concerning this communication should be directed to the Examiner Verbitsky who can be reached at (571) 272-2253 Monday through Friday 8:00 to 4:00 ET.

GKV

Gail Verbitsky

Primary Patent Examiner, TC 2800



June 30, 2004